APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/335,608	06/18/1999	TIMOTHY J. MOULSLEY	PHB-34-257	6666

			EXAMINER
24737	7590	05/10/2006	HYUN, SOON D

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ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 05/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/335,608	MOULSLEY, TIMOTHY J.
	Examiner	**Art Unit**	
	Soon D. Hyun	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>23 March 2006</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-7,9-17,21-28 and 30* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 2, 4-7, 9-17, 21-28, and 30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March

23, 2006 has been entered.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

3.   Claims 1, 2, 4-7, 9, 11, 15-17, 21, 22, and 25-28, and 30 are rejected under 35

U.S.C. 102(e) as being anticipated by Hamalainen et al (U.S. Patent No. 6,477,176).

       Regarding claims 1, 2, 6, 9 and 11, Hamalainen discloses a telecommunication

system suitable for transmitting real-time data (speech) and non-real time packet data,

comprising:

a first (a mobile communication system terminal in FIG. 1) and a second

communication station (a base station BTS in FIG. 8c);

a dual mode channel for communication of both the real time (speech signals,

col. 3, line 30) and the non-real time data (col. 3, line 39) from the first to the second

station, wherein the first station comprises a first transceiver which is operable to

transmit both the real-time and the non-real-time data, the second station comprises a

second transceiver which is operable to receive the real-time and/or the non-real-time

data (col. 3, lines 29-67), the first station further comprises a controller (10) for

generating an output data stream (frame structures in FIG. 3) comprising the real-time

data (speech signal bits in FIG. 3), the controller also allocating non-real-time packet

data (data, col. 4, lines 25-38) to the output data stream when the data rate of the real-

time data is less than the full capacity of the dual mode single channel, i.e., when there

is no more speech information to transmit, a few frames of comfort noise frames and a

SID frame are sent before transmitting data frames (col. 4, lines 63-65), therefore, the

data rate of real time data (speech information) is less than the full capacity of the dual

mode single channel during a multiframe period (a period of a last speech frame + a few

comfort noise frames + a SID frame) i.e., when there is no more speech information to

transmit, a few frames of comfort noise frames and a SID frame are sent before

transmitting data frames (col. 4, lines 63-65), therefore, the data rate of real time data

(speech information) is less than the full capacity of the dual mode single channel

during a multiframe period (a period of a last speech frame + a few comfort noise

frames + a SID frame), wherein for at least part of output stream (a multiframe period

comprising a speech frame, comfort frames, a SID frames and non-real time frames),

the real time data and non-real time packet in the frame each have a respective non-

zero minimum bit rate and combined bit rate for the multiframe period is less than a

maximum value (a capacity of the channel), wherein the part of the output stream is a

single time slot (a time period assigned for one communication session in GSM system

col. 1, lines 58-62).

Regarding claims 4 and 7, Hamalainen further discloses that the terminal

comprises a buffer (9) for storing the non-real-time packet data for transmission.

Regarding claim 5, Hamalainen further discloses that the invention is applied to a

cellular communication system (FIG. 8c) comprising a base station 33 (BTS) as the first

transceiver and a mobile station 32 (MS) as the second transceiver.

Regarding claim 10, refer to the discussion for claim 1. Examiner interprets that

the single channel is the dual mode channel carrying the real time data and non-real

time packet data in the multiframe for one communication station.

Regarding claims 15 and 27, refer to the discussion claims 1 and 10.

Hamalainen discloses a receiving method (FIG. 2) comprising:

receiving a combined data from a transmission channel by a mobile

communication system terminal in FIG. 2;

demodulating the data stream by a receiver (13); reading frame header (SP-ID or

D-ID in FIG. 3) to determine which frames contain packet data and which frames

contain speech data;

reconstituting the speech and packet data; and

providing the speech data to a speech decoder(3) and packet data output signal at distinct output devices (col. 4, lines 1-10), wherein the header indicates both the packet data and speech data being in a single dual mode channel, i.e., the header D-ID in a frame indicates both the packet data and speech data being in a single dual mode channel, because the packet data can be in the channel when the speech data is absent in the frame period, therefore, both speech data and packet data are in a dual mode channel of a multiframe (see the discussion for claims 1 and 10) having a plurality of frames.

Regarding claims 16, 21, and 25, refer to the discussion for the claims 1 and 10.

Hamalainen discloses a method comprising: accumulating non-real time packet data in a buffer (9 in FIG. 1);

allocating real-time data (speech) by a controller (10 in FIG. 1) to an output stream (FIG. 1);

determining when the real-time data does not require the full capacity of a transmission channel, i.e., a VAD (4 in FIG. 1) indicates the time of interruptions in the speech data;

allocating the non-real time packet data to the output data stream, when the real-time data does not require the full capacity of a transmission channel

allocating output data stream to a channel that occupies more than one slot (frame), i.e., multiframe in a transmission time frame.

Regarding claims 17 and 26, refer to the discussion for claims 1, 10, and 16.

Hamalainen discloses a method comprising:

accumulating non-real time packet data in a buffer (9 in FIG. 1);

allocating real-time data (speech) and the non-real time packet data in a variable

proportions to multiple time segments (a plurality of frames in FIG. 3) within a time

frame (a time of multiframe, col. 4, line 33) by a controller (10 in FIG. 1) to an output

stream (FIG. 1) when the real-time data does not require the full capacity of a

transmission channel; and

transmitting the time frame.

Regarding claim 22, refer to the discussion for claim 1, 10, and 15.

Hamalainen further discloses that the packet data and the speech data appear

together in one single time slot (a time of multiframe, col. 4, line 33).

Regarding claims 28 and 30, refer to the discussion for claim 1.

Hamalainen discloses an output data stream or data stream (FIG. 1) including

both real-time data (speech) and non-real time data (data from a buffer 9 in a single

time slot (a time period assigned for one communication session in GSM system, col. 1,

lines 58-62), the frame header D-ID in a frame (FIG. 3) indicates both real time and non-

real time data resides in the single time slot , because the packet data can be allocated

in the multiframe when the speech data is absent in the frame period. The header SP-ID

and D-ID, respectively indicates which part of each time segment (frame) has been

allocated to the speech dada or the packet data.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamalainen et al (U.S. Patent No. 6,477,176).

Refer to the discussion for claim 1.

However, Hamalainen does not explicitly teach that the data from a computer (6) is multimedia. It will be apparent to those of skill in the art that the computer could transmit and receive multimedia such as voice, video image, and data.

Therefore, it would have been obvious to one having ordinary skill in the art to transmit a first type (video) from the computer, second type (speech) form a microphone (1) and third type data (data) from the computer.

6.   Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamalainen et al (U.S. Patent No. 6,477,176) in view of Gudmundson (U.S. Patent No. 5,341,397).

Refer to the discussion for the claim 1.

However, Hamalainen discloses that the invention is generally implemented in GSM (TDMA) and thus, does not explicitly teach that the system could be applicable on a CDMA transmission method. Gudmundson discloses a DTX on a CDMA transmission system.

Those of skill in the art would have been motivated to apply a CDMA protocol using a single spreading code to each mobile for the DTX of Hamalainen to take advantage of using the CDMA such as increasing the system capacity and reducing

interference. Therefore, it would have been obvious to one having ordinary skill in the art to apply a CDMA protocol to the DTX of Hamalainen.

7.   Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamalainen et al (U.S. Patent No. 6,477,176) in view of Feldman (U.S. Patent No. 6,393,000).

Refer to the discussion for claims 2 and 7.

However, Hamalainen differs from the present application in that the controller receives the timing information form the VAD, while the present application receives it form the speech coding system.

Feldman teaches a speech coder (10 in FIG. 2) for a method of transmission of data during absence of speech signal, wherein a VAD is incorporated into the coder.

Those of skill in the art would have been motivated by Feldman to integrate the VAD (4) of Hamalainen into the speech coding system (speech processing circuit 3) to reduce a occupying space by combining the two circuitries.

Therefore, it would have been obvious to one having ordinary skill in the art for the controller of Hamalainen to receive the timing information from the speech processing circuit integrated with the VAD (speech coding system).

Response to Arguments

8.   Applicant's arguments filed 03/23/206 have been fully considered but they are not persuasive.

Applicant argues (Remarks page 10, lines 13-15) that the reference fails to teach

the controller allocating non-real time packet to the output data stream when the data

rate of the real time data is less than the full data capacity of the dual mode channel.

Examiner disagrees. The reference teaches that the controller also allocating non-real-

time packet data (data, col. 4, lines 25-38) to the output data stream when the data rate

of the real-time data is less than the full capacity of the dual mode single channel, i.e.,

when there is no more speech information to transmit, a few frames of comfort noise

frames and a SID frame are sent before transmitting data frames (col. 4, lines 63-65),

therefore, the data rate of real time data (speech information) is less than the full

capacity of the dual mode single channel during a multiframe period (a period of a last

speech frame + a few comfort noise frames + a SID frame).

Applicant further argues (Remarks page 11, lines 5-7) that the reference does

not take data rate (for real-time data) of the channel into account at all. Examiner

disagrees. The reference teaches that non-real-time packet data is allocated to the

output data stream when there is no more speech information to transmit (col. 4, lines

63-65), i.e., detecting no more speech data is detecting whether a data rate for the

speech information is zero or not.

Regarding claims 28 and 30, Applicant argues (Remarks page 11, lines 14-17)

that the reference fail to teach a respective header as recited in the claims. Examiner

disagrees. The reference discloses an output data streams (FIG. 3) including both real-

time data (speech) and non-real time data (data from a buffer 9 in a single time slot (a

time period assigned for one communication session in GSM system, col. 1, lines 58-

62), the frame header D-ID in a frame (FIG. 3) indicates both real time and non-real

time data resides in the single time slot , because the packet data can be allocated in

the multiframe when the speech data is absent in the frame period. The header SP-ID

. and D-ID, respectively indicates which part of each time segment (frame) has been

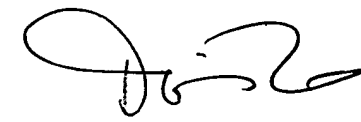allocated to the speech dada or the packet data.

Conclusion

9.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Soon D. Hyun whose telephone number is 571-272-

3121. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Doris H. To can be reached on 571-272-7629. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

S. Hyun
05/02/206

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